

REMARKS

Summary of the Office Action and Applicants' Reply

Claim Rejections-35 USC 102

The Examiner has rejected claims 1-3, 5, 8-11, 26-28, 30, 33, and 34 as being rejected under 35 USC 102(b) as being anticipated by Kheiri (US Pat. No. 6,364,889). The Examiner further explains that Kheiri discloses an electronic lancing device that uses magnetic forces.

Applicants have previously presented arguments that the Examiner finds to be non-persuasive. Applicant respectfully request that the Examiner reconsider some the previously presented arguments, namely the argument of a permanent magnet versus an electromagnet, and find that that this pending application is not anticipated by the Kheiri patent.

Kheiri discloses an electronic lancing device comprising a housing, a hollow shell, a magnet, a bobbin, a coil, a lancet, and an electronic circuit. The housing is standard housing used with electronic devices with a power button, firing button, and LED display. This housing is generally known and not ambiguous.

The hollow-cylindrical-shaped shell is fixedly mounted within the housing and includes at least one guide arm. The shell houses the magnet and a steel block, and partially houses the bobbin. The shell proscribes the path of motion of a free moving bobbin during out-stroke and in-stroke. Guide arms allow for only translation motion.

The magnet is a cylindrical body that is fixedly mounted with the shell. The magnet comprises a solid, generally cylindrical body that is attached to the bottom of the shell in between a steel block. The steel block brings the majority of the magnetic flux lines to intersect

the coils in order for the electronic device to achieve maximum efficiency. The magnet is generally known in the art.

The bobbin comprises a flat disc in between a first and second tubular body member. The bobbin has an attached coil that is disposed over the magnet. The only way the bobbin moves by way of magnetic force is if an electric current is run through the coil. If there is no electric current, there is no magnetic force.

The lancet is a needle attached to the bobbin. The electronic circuit comprises a switch, two timing chips, several resistors, and at least two transistors. When a user depresses the firing button, the switch forces trigger the timing chip, which regulates delivery of the bobbin and lancet. The electromagnetic circuit delivers current through the coil creating a repulsive electromagnetic field, causing the bobbin and lancet to be repulsed from the permanent magnet out of the shell. The timing chip regulates the in-stroke to current out of the coil, which creates an attractive magnetic field causing the bobbin and lancet to be attracted to the magnet.

It is commonly known to one skilled in the art that there are varying types of magnets. One type is a “permanent” magnet which stays magnetized over a long period of time and another is an “impermanent” magnet such as an electromagnet. Impermanent magnets lose its memory of previous magnetizations. Permanent magnets remain magnetized regardless of any external energy source. Impermanent magnets require external energy to have the magnetic properties realized. Without external energy, the “magnet” is simply an inactivated piece of metal.

The disclosure in Kheiri’s patent is quite clear that it is an electromagnet or an impermanent magnet. Applicant’s clearly disclose no use of external energy indicating a permanent magnetic setting. Kheiri simply does not disclose a permanent magnet. The

“magnet” as described in Kheiri is simply a piece of metal that has magnetic properties when activated and controlled by electric current. (Kheiri, paragraph 2, lines 2-3) Applicant has further distinguished this difference in the amended Specification.

Applicant’s claim 1 discloses a lancet device comprising a permanent magnetic element, a member capable of being affected by magnetic forces emanating from the permanent magnetic element, and a lancet movable between a withdrawn position and a piercing position.

Applicant’s member and Kheiri’s bobbin are quite different. Applicant discloses that the member is capable of being affected by simply magnetic forces that are constant in nature and always attractive, wherein Kheiri’s bobbin must be coupled with coil to receive electric current causing the bobbin to move. (Kheiri, Column 4, lines 41-59). Kheiri’s device simply waits for the current to be attractive and to activate the magnetic properties of the magnet 50. Therefore, Applicants member is not anticipated by Kheiri’s bobbin.

With respect to Claims 2 and 3, Applicant again respectfully argues that the electric current of Kheiri is not the “arming element” of Kheiri. Kheiri does not need an arming element as there is no motion until the current is sent. Applicants’ device does not utilize electric current and is unique over devices that do use current. Applicants’ device simply uses magnets that are constantly attracted and an arming element is needed. Parallels with electric currents are not accurate. A permanent magnet has very different properties from an electromagnetic.

Claim 5 discloses an activator adapted to release the permanent magnetic element from the armed position to permit movement. Kheiri discloses a firing button to activate an electronic circuit. The two parts (activator and firing button) are not the same because the activator releases the magnet that has been held into place against magnetic force, while the firing button

simply activates an electric current. It is the current that activates the magnet in Kheiri, not the firing button.

Similar to the activator and firing buttons mentioned above, housing is standard and not unique to Kheiri. Housing is simply a case to hold the device parts. Therefore, Applicant's respectfully argue that the Kheiri housing 10 should not be used to reject Applicant's Claim 8.

Applicant's Claim 26 is not anticipated by Kheiri because Applicant only uses permanent magnetic force, not electromagnetic forces. Kheiri requires electric current that Applicant does not. Applicant's use of only permanent magnets is a marked improvement over existing lancet devices that must utilize electric current.

Applicant has received clarification with respect to the rejections of Claims 27 and 28. In Kheiri and based on the Examiners' explanation, the bobbin 35 has a generally tubular body member 511 that is disposed over the magnet 50. The body member 511 does not appear to be movable and simply sits over the magnet 50 (Considering Figures 2 and 5). Further, the magnet within Kheiri is fixedly secure between a steel shell 45 and a steel block 52 so that the majority of the magnetic forces, when activated, intersect the coils. (Kheiri, page 5, lines 29-40). Applicants magnet is secured to an inner shaft and does not require the limitation of a steel block to bring the majority of magnetic forces to intersect the coils.

Applicant's Claims 33 and 34 is clear that this is simply a permanent magnetic lancet device as stated in Claim 33's amended preamble. This clearly distinguishes it from Kheiri's electronic lancing device and therefore is not anticipated by Kheiri. Furthermore, Kheiri's device has the magnet fixedly secure between the steel block and steel shell to bring the magnetic forces to intersect the coils. Applicant's device does not have this limitation as the magnet simply is secured to the inner shaft.

Claim Rejections-35 USC 103

The Examiner has rejected Applicant's claims 4, 6, 7, 12-14, 16-17, 20-22, 23, 29, and 32 as being obvious over Kheiri (described above in detail) in view of LeVaughn (US. Pat. No. 6,197,040).

LeVaughn discloses a lancing device that is spring loaded to activate the lancet. Kheiri's lancet is activated by electromagnetic forces. Electromagnetic forces were considered an improvement over the spring loaded lancets because it could offer a user more control. Applicant's device is activated by permanent magnets only. This aids in cutting down side to side vibration and allows for quick pricking of the skin without external energy supply.

With respect to Claim 4, since Kheiri is not a permanent magnet device, it would not have been obvious to add a lever member as one would not be necessary since the device will not activate without an electric current. The lever in Applicant's device is to hold the member or permanent magnetic element in place since the magnets create a constantly attracted state. Kheiri simply is not ever in a constantly attracted state and sits inactive until external energy (i.e. electric current) is applied. A lever as described in LeVaughn would serve no purpose in the invention disclosed by Kheiri. As such, Applicant's argue that Claim 4 is not obvious over Kheiri in view of LeVaughn.

Claim 6 has been amended to better reflect the permanent magnetic element to overcome Examiner's objections in view of Kheiri. Applicant respectfully requests that the Examiner re-consider this argument.

With respect to claim 7 or 23, Applicant again respectfully argues that the electric current of Kheiri is not the "arming element" of Kheiri. Kheiri does not need an arming element as there is no motion until the current is sent. The electric current simply activates the electromagnet that

in turn moves the lancet. Applicants' device does not utilize electric current and is unique over devices that do use current. Applicants' device simply uses magnets that are constantly attracted and an arming element is needed. Parallels with electric currents are not accurate. A permanent magnet is very different from an electromagnetic.

In Kheiri, it is not necessary to prevent movement in the armed position because if there is no electric current, there will be no movement. As such, it is not obvious that one would need to modify the teeth of LeVaughn to that of a circumferential manner on the bobbin of Kheiri. However, when magnets are continually attracted as in Applicant's device, it would be necessary to control the armed position. Because of this difference, Claims 21, 22, and 32 are not obvious over Kheiri in light of LeVaughn.

Kheiri discloses in its specification that the end cap 25 is used to control the depth of the puncture. (Column 3, lines 57-58). As such, it appears that Kheiri consider depth of puncture an issue and did work the end cap into control this. As such, it is not obvious that a depth adjuster and cocking tube would have been part of the Kheiri invention as taught by Simons, et al. As such Applicant's dial adjuster and follower are not obvious over Kheiri, Simons et al., and LeVaughn.

Request for Continued Examination

Applicant hereby makes a request for continued examination and has submitted the appropriate forms for this request.

Further Remarks

Applicant further respectfully requests that the Examiner consider the above amendments and reconsider her position on permanent versus electromagnetic elements.

Applicant has amended claim 8 to provide proper antecedent basis for "the housing".

Authorization

The Director is hereby authorized to charge any additional fees which may be required for this Reply, or credit any overpayment, to Deposit Account No. 50-3791.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Director is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 50-3791.

Respectfully submitted,

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